

WHAT IS CLAIMED IS:

1. An endotracheal intubation assistance device placed under the head and shoulders of a patient in a supine position, the device comprising:

5 a first chamber being inflatable to raise the shoulders of the patient relative to the head of the patient thereby facilitating insertion and proper placement of a laryngoscope blade into the mouth of the patient; and

10 a second chamber coupled to the first chamber, the second chamber being inflatable to raise the head of the patient relative to the shoulders of the patient thereby facilitating visualization of the patient's glottis for insertion of an endotracheal tube.

15 2. The endotracheal intubation assistance device of claim 1, each of said first chamber and said second chamber being operable to couple to a supply of an inflatant.

3. The endotracheal intubation assistance device of claim 2, wherein said inflatant is selected from the group consisting of a gas and a liquid.

20 4. The endotracheal intubation assistance device of claim 1, wherein at least one of said first and second chambers comprises a self expanding foam.

25 5. The endotracheal intubation assistance device of claim 4, said at least one of said first and second chambers comprising said self expanding foam being operable to couple to a suction device.

6. The endotracheal intubation assistance device of claim 5, said suction device being operable to remove air from said self expanding foam thereby causing said at least one chamber to deflate.

30 7. The endotracheal intubation assistance device of claim 1, said first and said second chambers being inflatable independently of one another.

8. The endotracheal intubation assistance device of claim 1, said first and said second chambers being deflatable independently of one another.

5 9. The endotracheal intubation assistance device of claim 7, further comprising a controller operable to control the inflation of said first and second chambers.

10 10. The endotracheal intubation assistance device of claim 9, further comprising a foot pedal coupled to said controller.

11. The endotracheal intubation assistance device of claim 7, further comprising:

a bellows operable to control inflation and deflation of said first and second chambers; and

15 a foot pedal coupled to said bellows and operable to control said bellows.

12. The endotracheal intubation assistance device of claim 9, wherein said controller is voice activated.

20 13. The endotracheal intubation assistance device of claim 9, wherein said controller is hand operated.

25 14. The endotracheal intubation assistance device of claim 1, further comprising a pressure applicator operable to apply pressure to a cricoid cartilage of said patient to prevent aspiration of gastric contents into the lungs of the patient and to provide better visualization of a larynx of said patient.

30 15. The endotracheal intubation assistance device of claim 14, wherein said pressure applicator comprises an adjustable strap.

16. The endotracheal intubation assistance device of claim 14, wherein said pressure applicator comprises a pressure chamber, said pressure chamber being inflatable independently of said first and second chambers.

5 17. The endotracheal intubation assistance device of claim 16, said pressure chamber being deflatable independently of said first and second chambers.

10 18. The endotracheal intubation assistance device of claim 14, said pressure applicator is coupled to one of said first and second chambers near a boundary of said first and second chambers.

15 19. The endotracheal intubation assistance device of claim 14, wherein said pressure applicator is operable to apply pressure to the cricoid cartilage when said second chamber of said intubation assistance device is inflated to facilitate visualization of the patient's glottis.

20 20. The endotracheal intubation assistance device of claim 16, wherein said pressure applicator is operable to apply pressure to the cricoid cartilage when said second chamber of said intubation assistance device is inflated, said pressure chamber being inflatable to apply additional pressure to the cricoid cartilage.

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21. A method to facilitate endotracheal intubation of a patient with an endotracheal intubation assistance device placed under the head and shoulders of the patient in a supine position, the method comprising:

inflating a first chamber of said endotracheal intubation assistance device to raise the shoulders of said patient to facilitate insertion of a laryngoscope blade into the patient's mouth;

substantially deflating said first chamber of said endotracheal intubation assistance device after the insertion of said laryngoscope blade into the patient's mouth; and

inflating a second chamber of said endotracheal intubation assistance device to raise the head of said patient to facilitate viewing of the patient's glottis for insertion of an endotracheal tube.

22. The method of claim 21, further comprising activating an inflatant supply to provide an inflatant to said first chamber to inflate said first chamber.

23. The method of claim 21, further comprising activating an inflatant supply to provide an inflatant to said second chamber to inflate said second chamber.

24. The method of claim 21, further comprising disabling a suction device to allow a self expanding foam of said first chamber to expand thereby causing inflation of said first chamber.

25. The method of claim 21, further comprising disabling a suction device to allow a self expanding foam of said second chamber to expand thereby causing inflation of said second chamber.

26. The method of claim 22, further comprising controlling an amount of said inflatant supplied to said first chamber to raise the patient's shoulders to a desired level.

27. The method of claim 21, further comprising applying pressure on a foot pedal coupled to a bellows to supply air from said bellows to said first chamber to inflate said first chamber.

5 28. The method of claim 27, further comprising removing pressure from said foot pedal to deflate said first chamber.

10 29. The method of claim 28, further comprising applying pressure on said foot pedal to supply air from said bellows to said second chamber to inflate said second chamber.

15 30. The method of claim 29, further comprising removing pressure from said foot pedal to deflate said second chamber.

20 31. The method of claim 23, further comprising controlling an amount of said inflatant supplied to said second chamber to raise the patient's head to a desired level.

25 32. The method of claim 26, wherein controlling an amount of inflatant comprises receiving an actuation signal from a foot pedal.

30 33. The method of claim 31, wherein controlling an amount of inflatant comprises receiving a verbal command.

35 34. The method of claim 26, wherein controlling an amount of inflatant comprises receiving an actuation signal from a hand operated unit.

36 35. The method of claim 21, further comprising:
inserting an endotracheal tube into said patient's trachea; and
substantially deflating said second chamber of said endotracheal intubation assistance device.

36. The method of claim 21, wherein said inflating of said second chamber occurs substantially simultaneously with said deflating of said first chamber.

5 37. The method of claim 21, further comprising applying pressure to a cricoid cartilage of said patient to prevent aspiration of gastric contents into the lungs of the patient and to provide better visualization of a larynx of said patient.

10 38. The method of claim 37, further comprising inflating a pressure chamber of a pressure applicator coupled to one of said first and second chambers to apply additional pressure to said cricoid cartilage.

15 39. The method of claim 38, further comprising disabling a suction device to allow a self expanding foam of said pressure chamber to expand thereby causing inflation of said pressure chamber.

40. The method of claim 38, further comprising activating an inflatable supply to provide an inflatable to said pressure chamber to inflate said pressure chamber.

20 41. The method of claim 40, further comprising controlling an amount of said inflatable supplied to said pressure chamber to apply a desired pressure to said cricoid cartilage.

42. An endotracheal intubation assistance device placed under the head and shoulders of a patient in a supine position, the device comprising:

first and second independently inflatable and deflatable chambers;

5 said first chamber being substantially inflated and said second chamber being substantially deflated to raise the shoulders of the patient relative to the head of the patient thereby facilitating insertion of a laryngoscope blade into the mouth of the patient; and

10 said second chamber being substantially inflated and said first chamber being substantially deflated to raise the head of the patient relative to the shoulders of the patient thereby facilitating visualization of a glottis of the patient for insertion of an endotracheal tube.

15 43. The endotracheal intubation assistance device of claim 42, further comprising a pressure applicator coupled to one of said first and second chambers and operable to apply pressure to a cricoid cartilage of said patient.

44. The endotracheal intubation assistance device of claim 43, said pressure applicator comprising a pressure chamber being inflatable and deflatable independently of said first and second chambers.

45. A method to facilitate endotracheal intubation of a patient with an endotracheal intubation assistance device placed under the head and shoulders of the patient in a supine position, the method comprising:

5 raising a first section of said endotracheal intubation assistance device to raise the patient's shoulders to facilitate insertion of a laryngoscope blade into the patient's mouth;

substantially lowering said first section of said endotracheal intubation assistance device after the insertion of said laryngoscope blade into the patient's mouth; and

10 raising a second section of said endotracheal intubation assistance device to raise the patient's head to facilitate viewing of the patient's glottis for insertion of an endotracheal tube.

46. The method of claim 45, further comprising supporting said first and second sections on first and second platforms respectively, said first and second platforms being operable to be raised or lowered independently of each other.

47. The method of claim 46, wherein raising said first section comprises raising said first platform supporting said first section.

20 48. The method of claim 46, wherein raising said second section comprises raising said second platform supporting said second section.

49. An endotracheal intubation assistance device placed under the head and shoulders of a patient in a supine position, the device comprising:

a first section;

a second section coupled to said first section;

5 a first platform supporting said first section;

a second platform supporting said second section;

said first platform being substantially raised and said second platform being substantially lowered to raise the patient's shoulder relative to the patient's head thereby facilitating insertion of a laryngoscope blade into the mouth of the patient; and

said second platform being substantially raised and said first platform being substantially lowered to raise the patient's head relative to the patient's shoulders thereby facilitating visualization of the patient's glottis for insertion of an endotracheal tube.

50. The endotracheal intubation assistance device of claim 49, further comprising a pressure applicator coupled to one of said first and second platforms and operable to apply pressure to a cricoid cartilage of said patient.

51. The endotracheal intubation assistance device of claim 50, said pressure applicator comprising a pressure chamber being inflatable and deflatable.